2000 ESPA Sample Form
Mathematics
Scoring Key

Item #	Correct Answer	Cluster, Macro*	Knowledge Skill*	Problem Solving Skill*	Power Base Elements*
1	D	1.F	01		
2	A	1.F	01		
3	B	1.F	01		Estimation
4	C	1.F	01		Estimation
5	B	1.E	03		
6	D	1.E	03		
7	D	1.E	03		
8	B	1.E	03		
9	D	5.A	03	04	Problem solving, Reasoning
10	A	5.B	01	05	Problem solving, Reasoning
11	C	1.D	01	10	Problem solving, Reasoning
12	C	3.D		02	Problem solving, Reasoning, Tools and technology
13	B	3.C	01	06	Problem solving, Reasoning
14	D	2.A	03	07	Reasoning
15	C	3.A	03		
16	C	4.A	01	03	Problem solving, Reasoning
17	A	4.C	01		Problem solving, Reasoning
18	B	2.A	06	11	Problem solving, Reasoning, Tools and technology
19	B	5.C	01	02	Problem solving, Reasoning, Connections
20	C	1.A	02	06	Problem solving, Reasoning, Connections
21	See rubric	4.B	02	03	Problem solving, Reasoning, Connections, Communications
22	B	3.A	01		Reasoning
23	A	5.A	01	04	Problem solving, Reasoning
24	D	4.A	02		Problem solving, Reasoning, Connections
25	B	4.B	01	04	Problem solving, Reasoning
26	B	4.B	01	04	Problem solving, Reasoning, Tools and technology
27	B	2.A	01	09	Reasoning
28	See rubric	2.A	01	11	Problem solving, Reasoning, Communications
29	See rubric	1.A	03	06	Problem solving, Reasoning, Communications
30	B	3.B	01	06	Connections
31	C	5.B	02	06	Problem solving, Reasoning
32	C	3.D	01	06	Problem solving, Reasoning
33	B	1.H	02		Reasoning
34	D	1.G	03		Problem solving, Reasoning
35	D	2.A	06	11	Problem solving, Reasoning
36	See rubric	3.C	01	05	Problem solving, Reasoning, Communications
37	See rubric	5.A	01	06	Problem solving, Reasoning, Communications

Scoring Instructions

Official scores for open-ended items on a live test are derived from two independent readings of each student response. If you do not plan to use a second scorer, simply assign the same score twice. *Responses that are unintelligible, not in English, off topic, not responsive, or only a partial fragment are assigned a score of **zero points***. If you have difficulty deciding on a score point or feel a particular response lies between two score points on the rubric, you may assign "split" scores (i.e., 2 and 3). Based on the item type, the two scores are either added together or averaged (which can result in half-points) in computing the total number of points earned.

To compute the total score, add the following:
- For multiple-choice items 1-8, count one-half point for each correct answer (maximum 4 points possible)
- Count one point for each correct answer on all other multiple-choice items. (maximum 24 points possible)
- Scores for open-ended items 21, 28, 29, 36, and 37 (<u>average</u> of two scores for each item – minimum of 0, maximum of 3 points possible for each item or 15 maximum total points possible).

Total of 43 maximum points possible.

<u>Clusters/Macros</u>

1. Number Sense, Operations, and Properties
   - 1.A. Demonstrate meaning for whole numbers, negative numbers, negative integers, commonly used fractions and decimals using physical materials, technology and real-life experiences.
   - 1.B. Show understanding of place value concepts and numeration using counting, grouping and pattern identification.
   - 1.C. Compare and order whole numbers, commonly used fractions and decimals.
   - 1.D. Demonstrate an understanding of the meanings of the four basic arithmetic operations through modeling and discussion.
   - 1.E. Use and explain paper and pencil procedures for performing whole number calculations.
   - 1.F. Select and use appropriate whole number computational methods and check the reasonableness of the results.
   - 1.G. Perform operations with commonly used fractions and decimals, using models.
   - 1.H. Count and perform simple operations using money.

2. Measurement
   - 2.A. Select and use appropriate non-standard and standard units of measure to describe, compare and order various quantities.

3. Spatial Sense and Geometry
   - 3.A. Describe and use the properties and relationships of 2- and 3-dimensional shapes.
   - 3.B. Use coordinates and paths in maps, tables and grids.
   - 3.C. Use transformations to determine spatial relationships among 2-dimensional figures.
   - 3.D. Demonstrate the ways in which geometric shapes and objects can be measured, combined, subdivided and changed.

4. Data Analysis, Probability and Discrete Mathematics
   - 4.A. Determine the probability of a simple event and predict outcomes.
   - 4.B. Collect, organize, analyze and interpret data.
   - 4.C. Follow, devise and describe algorithms.
   - 4.D. Devise and use strategies for puzzles, games and counting problems, as well as problems involving combinations and permutations.

5. Patterns and Algebra
   - 5.A. Use a variety of materials to extend, create and describe patterns, sequences and relationships that are in mathematics and other disciplines.
   - 5.B. Use algebraic concepts and processes to form, describe and verify generalizations based on observations of patterns and relationships.
   - 5.C. Recognize and describe change in quantities.

*Refer to the *Directory of Test Specifications and Sample Items for the Elementary School Proficiency Assessment (ESPA) in Mathematics*, published by the New Jersey Department of Education in April, 1998 for further information.

2000 ESPA Sample Form
Mathematics
Score Interpretation Guide

The New Jersey Department of Education is pleased to provide the 2000 ESPA Sample Forms as tools for gauging student achievement prior to the live administration of these tests. Although the sample forms contain previously tested items and are built to specifications *similar* to the "real" test, they are not the "real" test. As such, these sample forms are not intended to predict student scores on the ESPA. There are several reasons for this:

1. Student performance on these or any test will vary from day to day.
2. The sample forms will be given under less standardized conditions than the conditions used for the live tests.
3. The sample forms will be scored locally without the extensive training and accuracy controls used to score the live tests.
4. Continued instruction will occur in the time between the administration of the sample form and the live test.

However, these sample forms can be used to screen for students who may have difficulty reaching the Proficient level. Also, by examining items that a student or group of students (e.g., a classroom) answer incorrectly, teachers can identify possible strengths and weaknesses in specific skills. The scoring key provides links to the *Core Curriculum Content Standards* and the *Directory of Test Specifications and Sample Items* to help you understand the content, skill and process domains that each item represents.

Individual student performance on these sample forms can be interpreted as follows:

Level	Score Range	Indication
1	0 – 25	There is a good chance that the student would not score at the Proficient level.
2	25.5 – 37	There is a good chance that the student would score just above or just below the Proficient level cut-score.
3	37.5 - 43	There is a good chance that the student is at or above the Proficient level

The New Jersey Department of Education highly recommends that teachers use sample form results as only one piece of information when determining the instructional needs of a student or group of students.
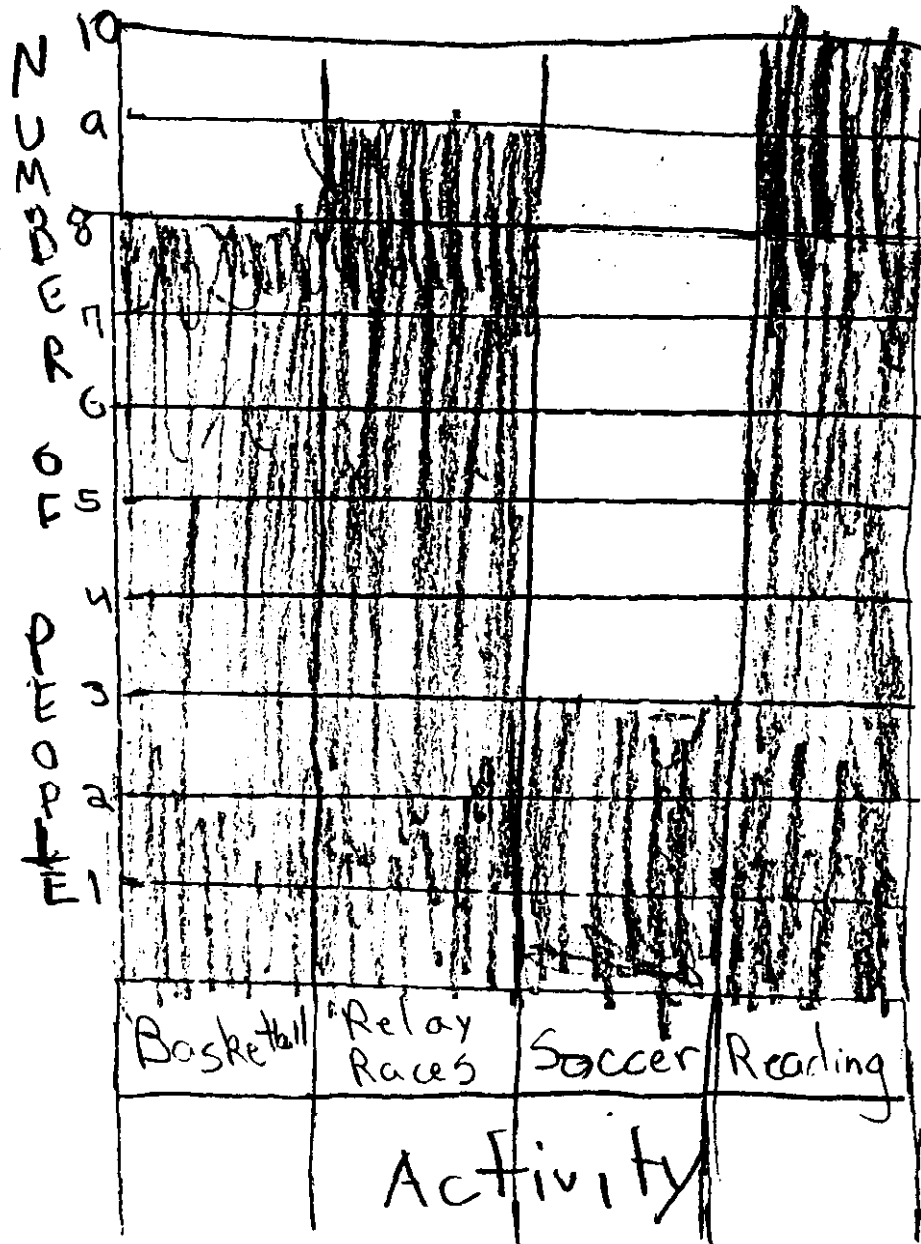
Number of students choosing an activity

A bar graph titled "Number of students choosing an activity". The y-axis is labeled "Number of students" ranging from 0 to 10. The x-axis is labeled "Activity" with four categories: Basketball (8), Relay Races (9), Soccer (3), and Reading (10).
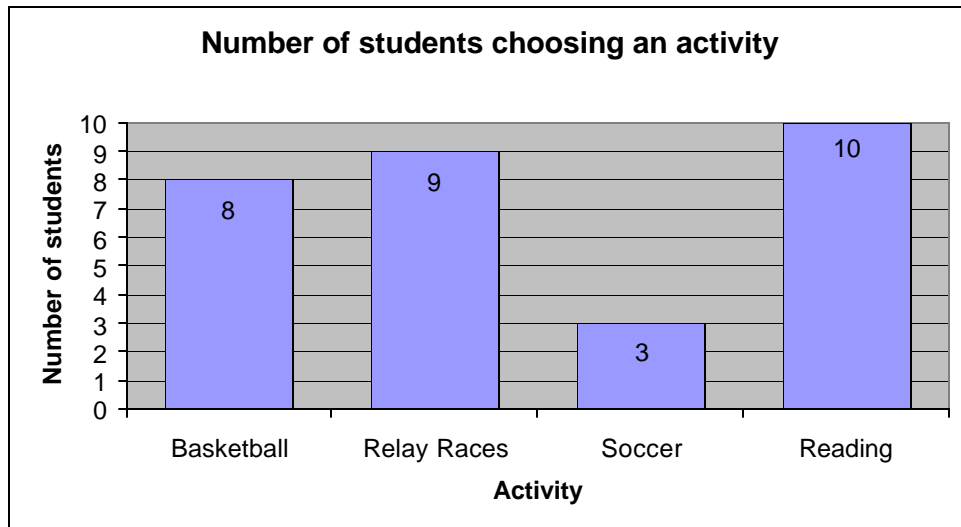
3 points – The student creates an accurate bar graph similar to above. The graph includes all appropriate labels and a title.

2 points – The student creates a bar graph similar to above, but chooses a different class or omits axis labels and/or a title.

OR   The student creates a bar graph similar to above with appropriate labels and title, but the student makes an error in the size of one of the bars on the graph.

1 point - The student attempts to create a bar graph and shows some understanding of the problem, but the graph shows major errors.

OR   The student creates a correct graph that is not a bar graph.

0 points - The response shows limited to no understanding of the problem's mathematical concepts.

9.

Mrs. Fleming's class choosing an activity

MATHEMATICS   **OPEN-ENDED QU**

9.

Choosing a
activity is Mrs.
Flemming's class

Bar graph titled "students" (vertical axis, scale 1-10) with categories: soccer (3), basketball (8), relay races (9), reading (10).

175819

9.

Mrs. Flemmings Graph

number of Students

activity

Basket Ball   Relay Races   Soccer   Reading
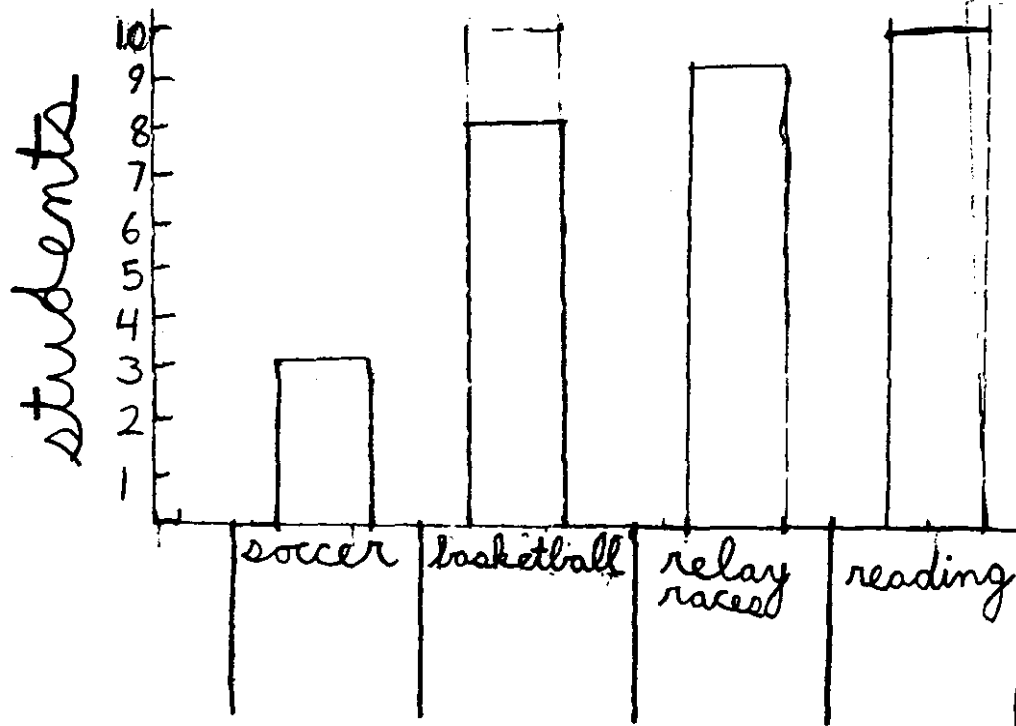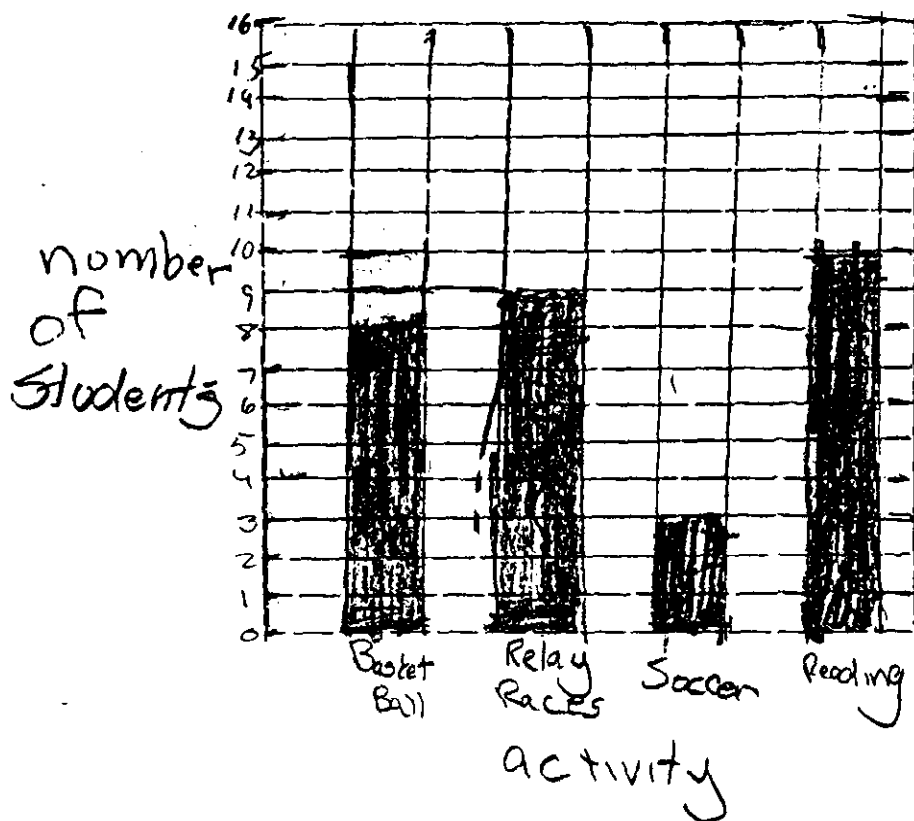
Mrs. Flemming had 8 students playing basketball, 9 racing, 3 playing soccer, and 10 reading

9.

Basketball	Relay Races	Soccer	Reading
8	9	3	10
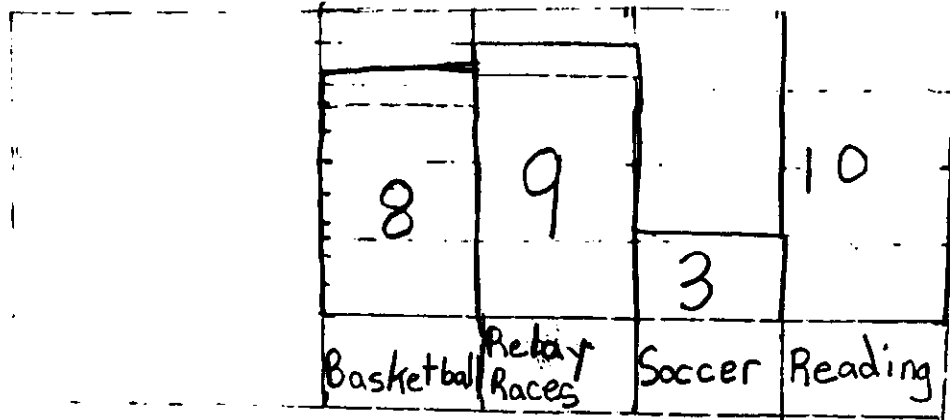
Ms. Flemming's Class's Bar Graph on what to do after Lunch!

9.

174024

9.

Ms. FLemming's class

Kids
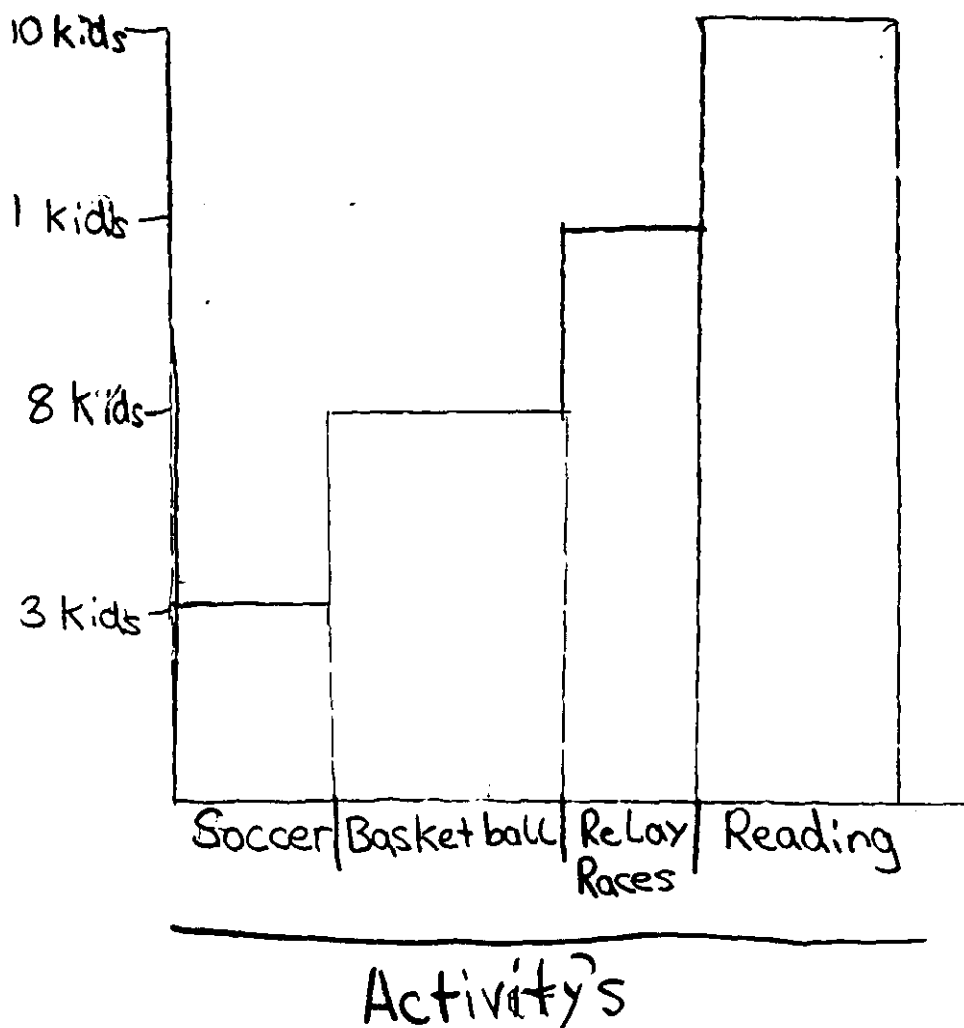
10 kids

1 kids

8 kids

3 kids

Soccer | Basketball | ReLay Races | Reading

Activity's

MATHEMATICS	OPEN-

9.

Basketball	Relay Races	Soccer	Reading
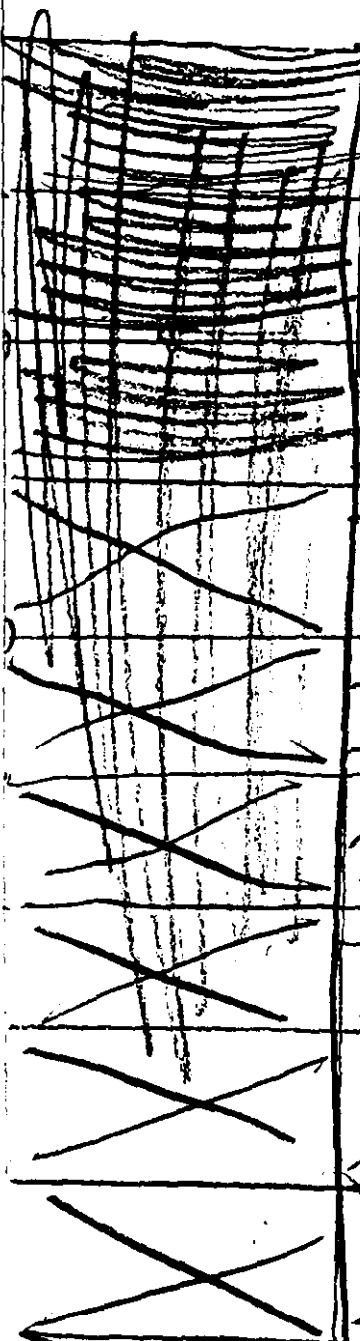
Basketball	Relay Races	Soccer	Reading

Turn to page 7.

9.

Ms. F Lemming's Activity
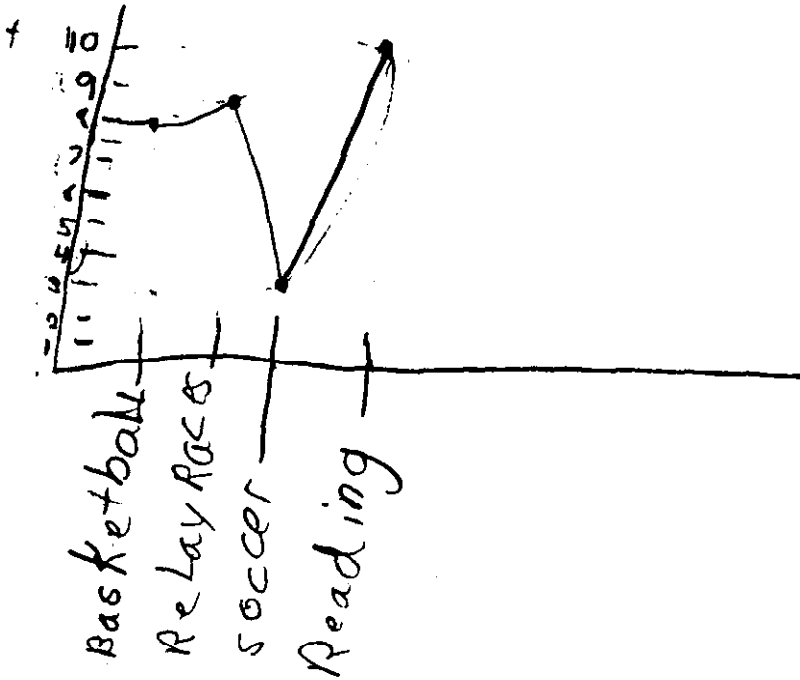
173957

9.

with activity won
from last week

9.
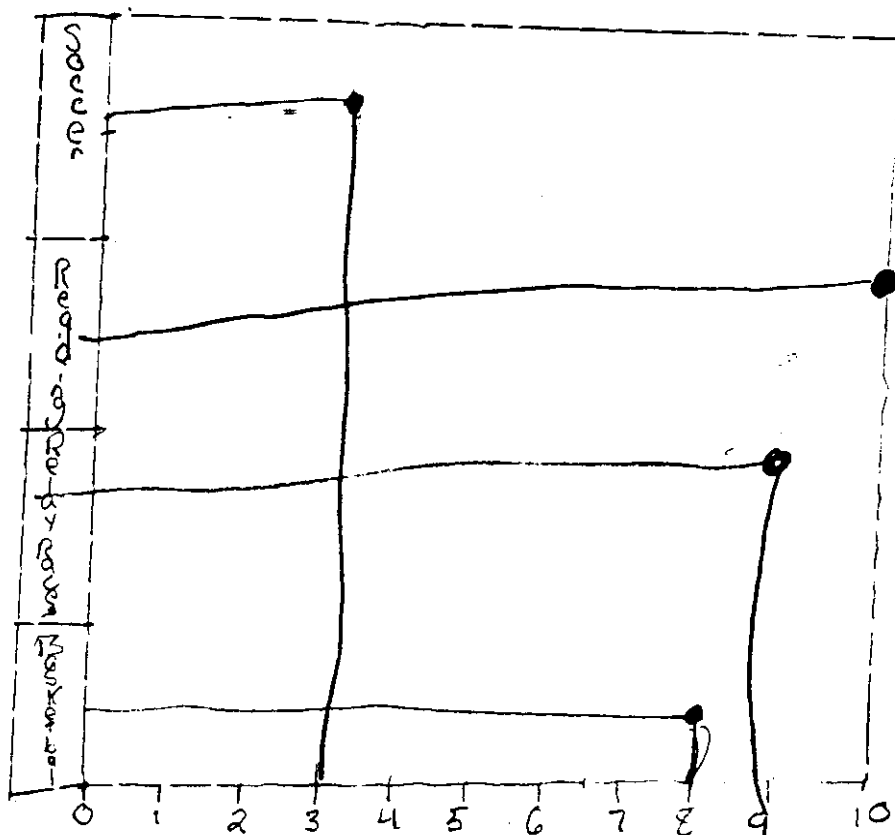
The Footh Grad read
and play Basket Ball

	Basket Ball	Relay Races	Socer	Reading
Mr. Green	10	7	8	9
Mr. Batita	17	10	9	8
Mr. Kelly	11	6	4	9
Ms. Fleming	8	9	3	10
	36	32	24	36

174016

9.

173959
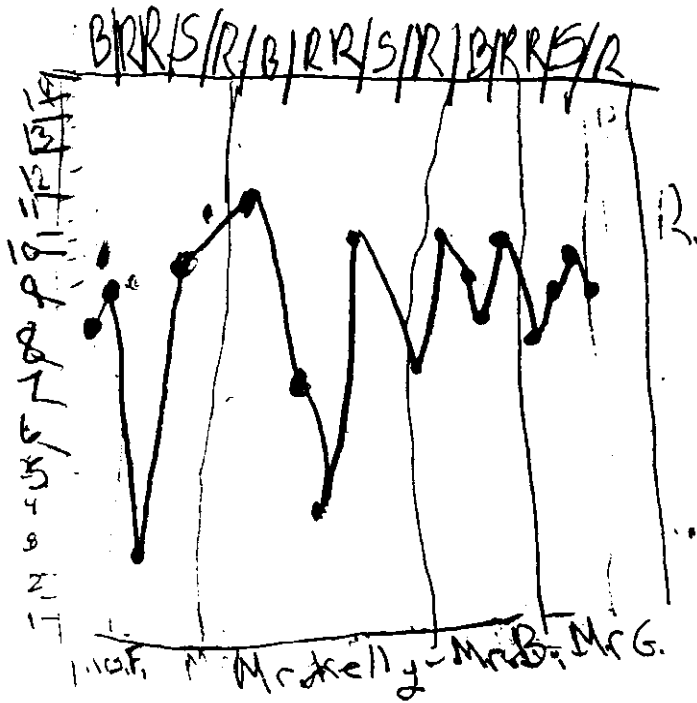
9.

Who Wants to PlAY What?

| WWWWWWWW	Basetball	r day races	Soccer	Reading
Ms. Flemming	8	9	3	10

3 points – The student correctly determines the width of the garden (6 feet) and shows his or her work. The student also determines that Veronica would need 14 fence posts and explains his or her answer.

2 points – The student correctly determines the width of the garden (6 feet) and shows his or her work, but does not get the correct answer to the number of fence posts.

    OR   The student correctly determines the width of the garden and the correct number of fence posts but shows no work.

1 point – The student does not attempt to determine the width of the garden, but finds the number of fence posts, with an incomplete explanation.

    OR   The student correctly determines the width of the garden with an incomplete or inadequate explanation and number of fence posts is incorrect or missing.

0 points – The response shows insufficient understanding of the problem's mathematical concepts.

▲ ▲ ▲ ▲

28. Veronica is making a rectangular garden. She plans to put a tence around the garden using 28 feet of fencing, and she wants the garden to be 8 feet long.

- **How wide will Veronica's garden be? Show how you got your answer.**

- **If Veronica is going to put fence posts two feet apart around the outside of the garden, how many fence posts will she need? Show all of your work and explain your answer.**

Work area for question 28

8

6 | Garden | 6

8
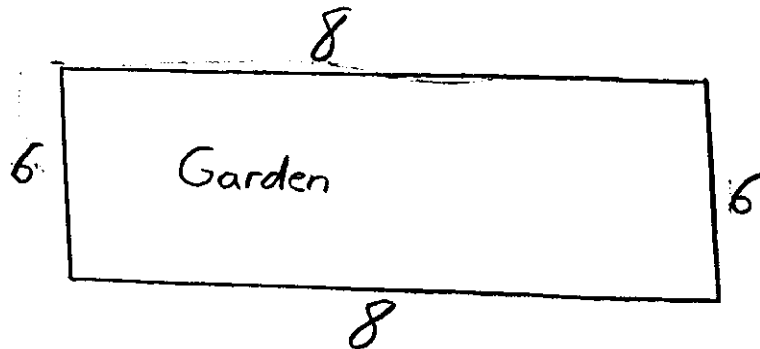
1. Veronica's garden is 6 feet wide.
I got my answer because if her garden is 8 feet long, 8 +8=16 28-16=12 half of 12 is 6.

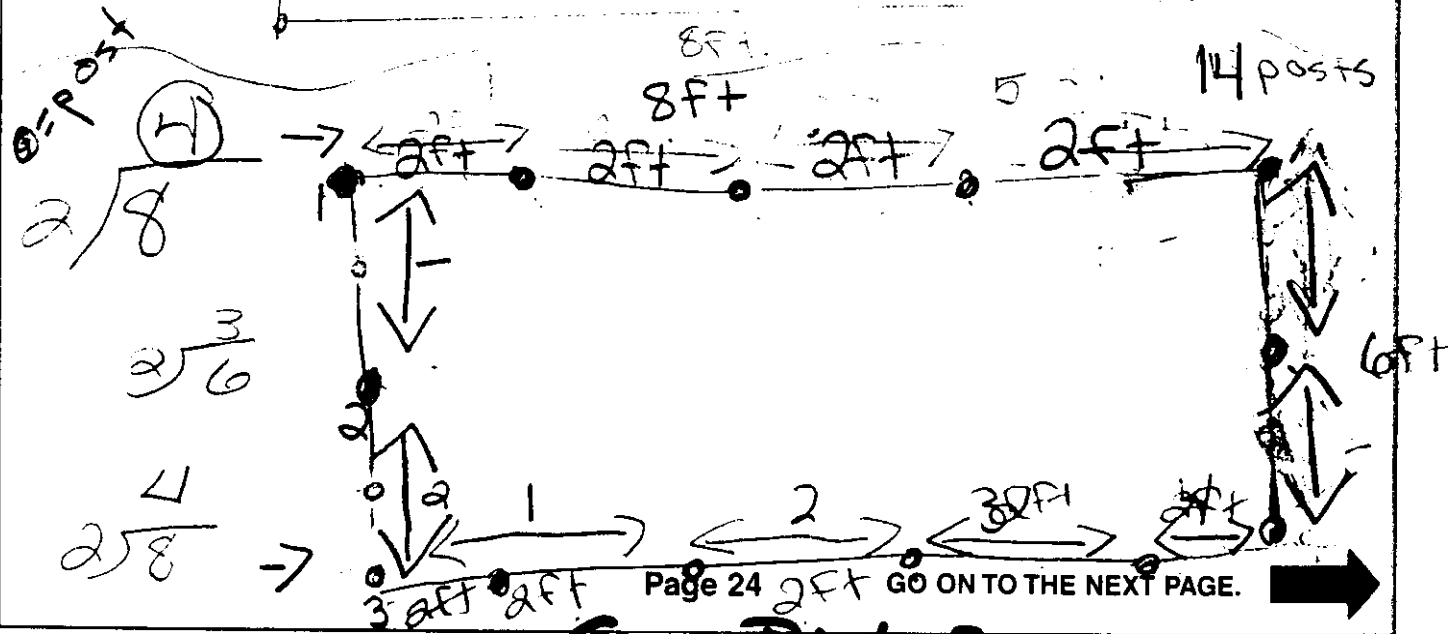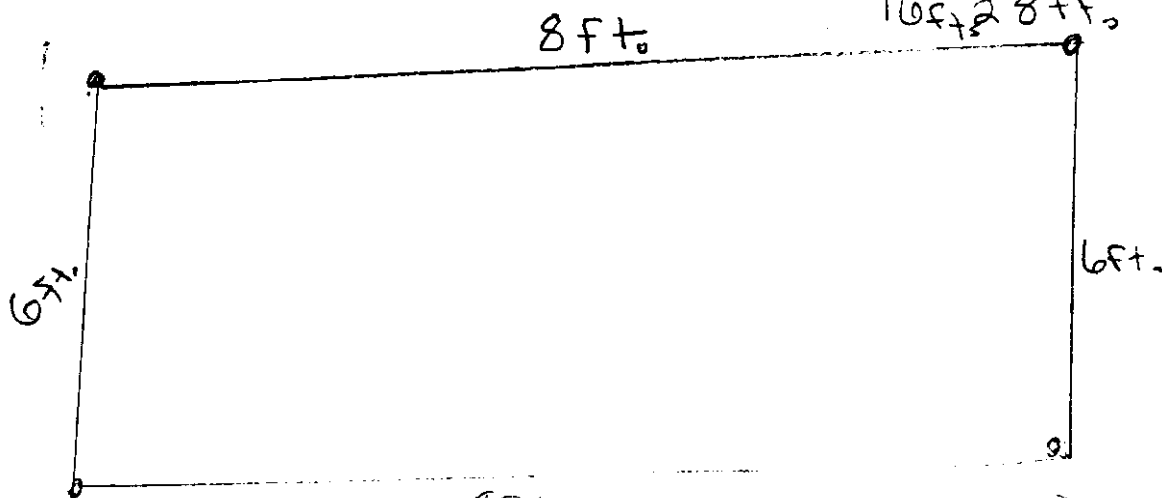2. Her garden needs 14 posts because 28 ÷2 =14.

Score Point: 3

▲ ▲ ▲ ▲

28. **Veronica is making a rectangular garden. She plans to put a fence around the garden using 28 feet of fencing, and she wants the garden to be 8 feet long.**

- **How wide will Veronica's garden be? Show how you got your answer.**

- **If Veronica is going to put fence posts two feet apart around the outside of the garden, how many fence posts will she need? Show all of your work and explain your answer.**

Work area for question 28

$$8ft \quad 16ft$$
$$+ 8ft \quad 12ft$$
$$\overline{10ft+2 \ 8ft}$$

8ft

6ft

6ft

8ft

8ft

5

14 posts

⊙ = post

4

2⟌8

2 3/6

2⟌8

2ft 2ft 2ft 2ft

1

2

30ft

6ft

3 2ft 2ft

2ft GO ON TO THE NEXT PAGE. ➡

Score Point 3

310539 40

28. Veronica is making a rectangular garden. She plans to put a fence around the garden using 28 feet of fencing, and she wants the garden to be 8 feet long.

- How wide will Veronica's garden be? Show how you got your answer.

- If Veronica is going to put fence posts two feet apart around the outside of the garden, how many fence posts will she need? Show all of your work and explain your answer.

Work area for question 28

1. 6   6 ♡ becaus $8 \times 2 = 16 + 12 = 28$. $12 \div 2 = 6$

2. 14   because $28 \div 2 = 14$

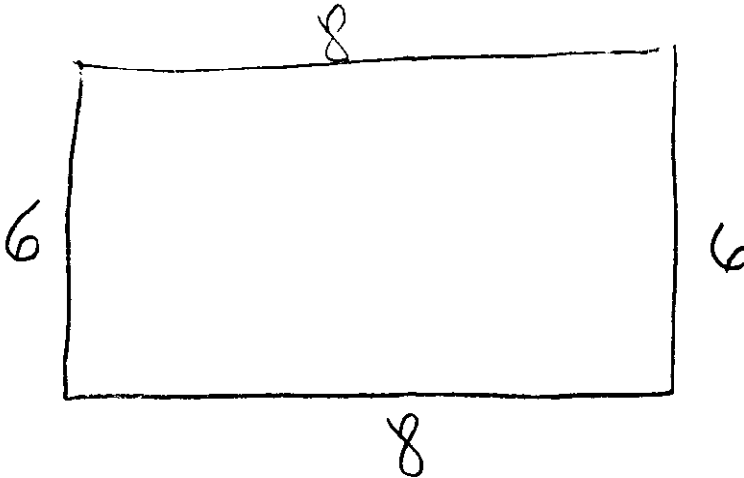**Score Point : 3**

304962

Score: 2

Sample #:   1

▲ ▲ ▲ ▲

28. Veronica is making a rectangular garden. She plans to put a fence around the garden using 28 feet of fencing, and she wants the garden to be 8 feet long.

- **How wide will Veronica's garden be? Show how you got your answer.**

- **If Veronica is going to put fence posts two feet apart around the outside of the garden, how many fence posts will she need? Show all of your work and explain your answer.**

Work area for question 28

Veronica's garden is 12 feet wide. I got this answer because if you make a rectangle and put an eight on the top and bottom because their going to be the same length. Then you add the both sides. You get 16. Subtract 16 from 28 equals 12. Divide it by 2 and it equals to 6. So then you put 6 on each side. To check, you add 16 + 12 = 28. She will need four fence posts because she will need it for each corner.

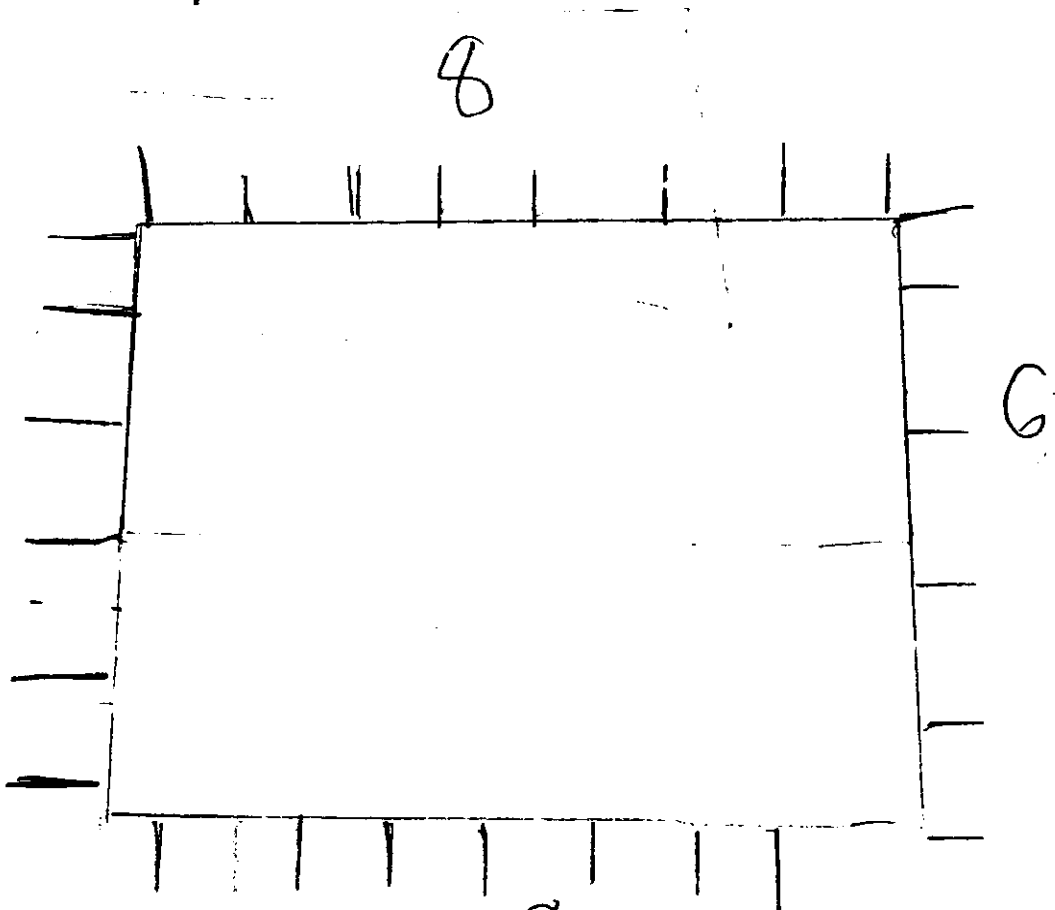**Score Print: 2**

GO ON TO THE NEXT PAGE. ➡

307149

10

▲ ▲ ▲ ▲

28. Veronica is making a rectangular garden. She plans to put a fence around the garden using 28 feet of fencing, and she wants the garden to be 8 feet long.

- How wide will Veronica's garden be? Show how you got your answer.

- If Veronica is going to put fence posts two feet apart around the outside of the garden, how many fence posts will she need? Show all of your work and explain your answer.

Work area for question 28

8

6

6

I t should 8
be 28 feet long
because she
needs to pu 28 feet of fencing in.

Score Point: 2

310879

▲▲▲▲

28. Veronica is making a rectangular garden. She plans to put a fence around the garden using 28 feet of fencing, and she wants the garden to be 8 feet long.

- How wide will Veronica's garden be? Show how you got your answer.

- If Veronica is going to put fence posts two feet apart around the outside of the garden, how many fence posts will she need? Show all of your work and explain your answer.

Work area for question 28

Veronica's garden will be six feet wide.

$$\begin{array}{r} 8 \\ +8 \\ \hline 16 \end{array} \qquad \begin{array}{r} 28 \\ -16 \\ \hline 12 \end{array} \qquad \begin{array}{r} 6 \\ 2\overline{)12} \\ -12 \\ \hline 0 \end{array}$$
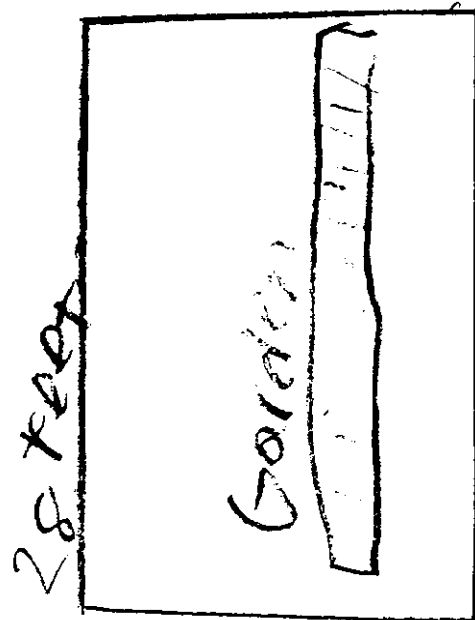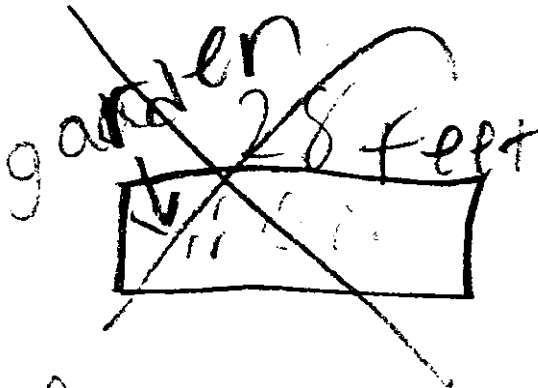
Veronica will need 15 fence posts.

Score Point : 2

▲▲▲▲

28. Veronica is making a rectangular garden. She plans to put a fence around the garden using 28 feet of fencing, and she wants the garden to be 8 feet long.

- How wide will Veronica's garden be? Show how you got your answer.

- If Veronica is going to put fence posts two feet apart around the outside of the garden, how many fence posts will she need? Show all of your work and explain your answer.

Work area for question 28

garden 28 feet

28 feet

Garden

$$\begin{array}{r} 2 \\ 8 \\ 2 \\ 8 \\ 2 \\ 8 \\ +2 \\ \hline 92 \end{array}$$

28 feet

$$28\overline{)28} \\ -2 \\ \hline 08$$

14 fence posts

The way I go: was I divided and added.

my answer

Score Point: 1

310538 3

ESPA - SEC

ESPA Math
Item: 28
Score: 1
Sample #: 2

G 11

▲ ▲ ▲ ▲

28. **Veronica is making a rectangular garden. She plans to put a tence around the garden using 28 feet of fencing, and she wants the garden to be 8 feet long.**

- **How wide will Veronica's garden be? Show how you got your answer.**

- **If Veronica is going to put fence posts two feet apart around the outside of the garden, how many fence posts will she need? Show all of your work and explain your answer.**

Work area for question 28

Veronica ... be 2 feet wide.

Answer) Veronica will need 14 fence posts.

14 fence posts

$$2\overline{)7} \text{ fencing}$$
$$-\underline{14}$$
$$8$$
$$0$$

Score Point: 1

310439

43

▲▲▲▲

28. Veronica is making a rectangular garden. She plans to put a fence around the garden using 28 feet of fencing, and she wants the garden to be 8 feet long.

- How wide will Veronica's garden be? Show how you got your answer. 20   28-8=8   how much fencing
   left ? 20

- If Veronica is going to put fence posts two feet apart around the outside of the garden, how many fence posts will she need? Show all of your work and explain your answer. 14

Work area for question 28

$$28 \div 2 = 14$$

Score Point : 1

305202

55

ESPA Math
ESPA - SEC   Item: 28
Score: 0
Sample #: 1

G 13

▲ ▲ ▲ ▲

28. Veronica is making a rectangular garden. She plans to put a fence around the garden using 28 feet of fencing, and she wants the garden to be 8 feet long.
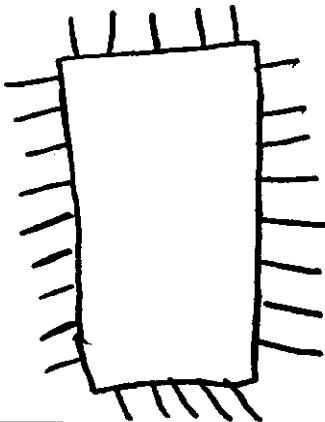
- How wide will Veronica's garden be? Show how you got your answer.

- If Veronica is going to put fence posts two feet apart around the outside of the garden, how many fence posts will she need? Show all of your work and explain your answer.

Work area for question 28

$1 \cdot \frac{28}{+28}$

$\overline{56}$ inches wide

I got my answer by adding 28 + 28 = 56.

2. She will need 27 fence posts. I got that answer by drawing a garden and pleting the posts.

27.

Score Point: 0

309973

95

ESPA Math
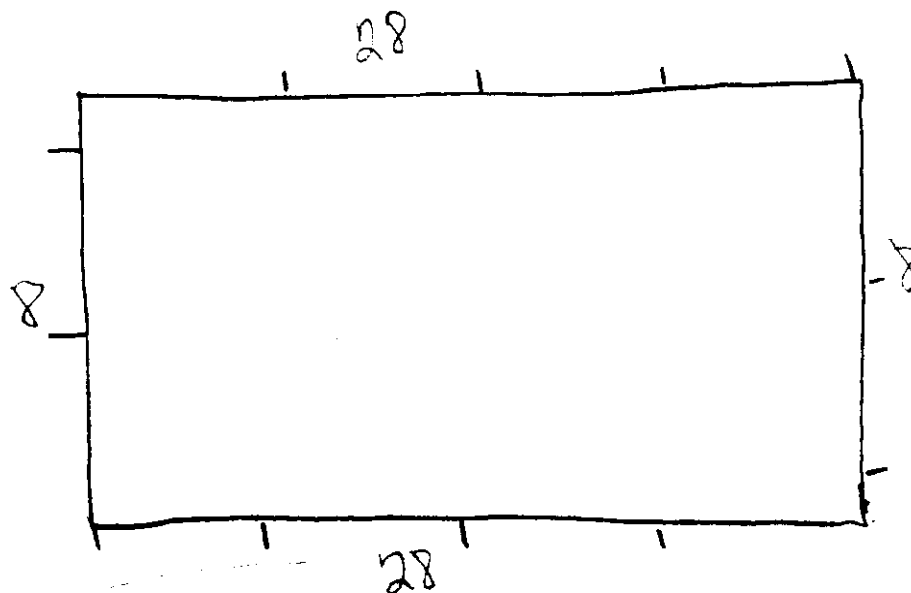Item: 28
Score: 0
Sample #: 2
ESP
G 14

▲ ▲ ▲ ▲

28. **Veronica is making a rectangular garden. She plans to put a fence around the garden using 28 feet of fencing, and she wants the garden to be 8 feet long.**

- **How wide will Veronica's garden be? Show how you got your answer.**

- **If Veronica is going to put fence posts two feet apart around the outside of the garden, how many fence posts will she need? Show all of your work and explain your answer.**

Work area for question 28

12 posts because you mesure on your ruler 2 and then you keep moving the ruler.

l = post

28

8

8

28

28
+28
56 wide

Score Point: 0

Page 24   GO ON TO THE NEXT PAGE. ➡

▲▲▲▲

28. Veronica is making a rectangular garden. She plans to put a fence around the garden using 28 feet of fencing, and she wants the garden to be 8 feet long.
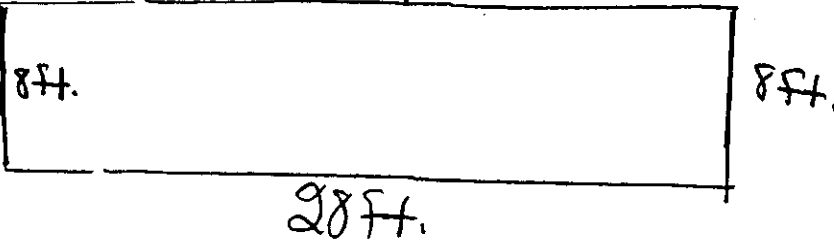
- How wide will Veronica's garden be? Show how you got your answer.

- If Veronica is going to put fence posts two feet apart around the outside of the garden, how many fence posts will she need? Show all of your work and explain your answer.

Work area for question 28

28 ft.

8 ft.   8 ft.

28 ft.

Veronica all ready knows how long it is now she needs to know if she can feat her plants in there are not.

Veronica would probly need about 50 posts around the garden. Like measure the little thin sticks thats on there the little white ones.

Score Point: 0

3 points – The student determines that 5 students chose to watch a movie, shows how the answer was found, and gives a clear and logical explanation detailing how the problem was solved.

2 points – The student determines that 5 students chose to watch a movie and provides a vague or incomplete explanation of an appropriate process for solving the problem.

    OR The student, due to a minor error, gives an incorrect answer for the number of students who chose to watch a movie but gives a clear and logical explanation of how the problem was solved.

1 point – The student attempts to find the number of students who chose to watch a movie and may find at least one of the answers (5, 10 or 15) correctly, showing some understanding of the problem. However, the student's work shows major errors, incomplete procedures, or an incomplete explanation.

0 points – The response shows insufficient understanding of the problem's mathematical concepts.

29. On Friday, your class will have a party after lunch. Each of the
30 students in your class has chosen one party activity. Here are
the results:

$15 = \frac{1}{2}$ of the class chose outdoor relay races.

$+10\ \frac{1}{3}$ of the class chose indoor games.

$\overline{25}$

The rest of the class chose to watch a movie.

- How many students chose to watch a movie?

- Show all of your work and explain your answer.

Work area for question 29

Five of the $\overset{2}{3}10$
student voted -25
for a movie. $\overline{5}$
I got my answer
by adding how
many studdents
wanted to
do an outdoor relay or indoor games
wich was twenty-five and then
I subtracted twenty-five from
thirty wich then I had my
answer.

15 students outdoor relay
+10 student indoor games
$\overline{25}$ total
5 students chose to watch
a movie

STOP

If you have time, you may review your work in this section only.   DO NOT GO ON
UNTIL YOU ARE
TOLD TO DO SO.

Score Point: 3

29. On Friday, your class will have a party after lunch. Each of the 30 students in your class has chosen one party activity. Here are the results:

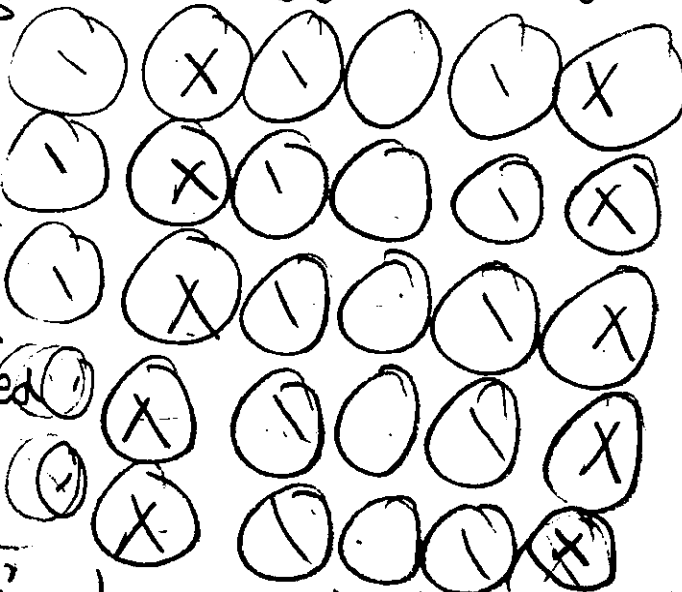$\frac{1}{2}$ of the class chose outdoor relay races.

$\frac{1}{3}$ of the class chose indoor games.

The rest of the class chose to watch a movie.

- How many students chose to watch a movie?

- Show all of your work and explain your answer.

\ = Kids who want to do relay races.

X = Kids who wanted indoor games.

15 Kids want to do relay races
_____
10 Kids indoor games
_____
5 Kids movie

Work area for question 29

Five Kids want to watch a movie. I got that by counting how many kids wanted to do the other things. Then, the ones who were left wanted to watch a movie.

STOP

If you have time, you may review your work in this section only.

DO NOT GO ON UNTIL YOU ARE TOLD TO DO SO.

Score Point : 3

29. On Friday, your class will have a party after lunch. Each of the 30 students in your class has chosen one party activity. Here are the results:
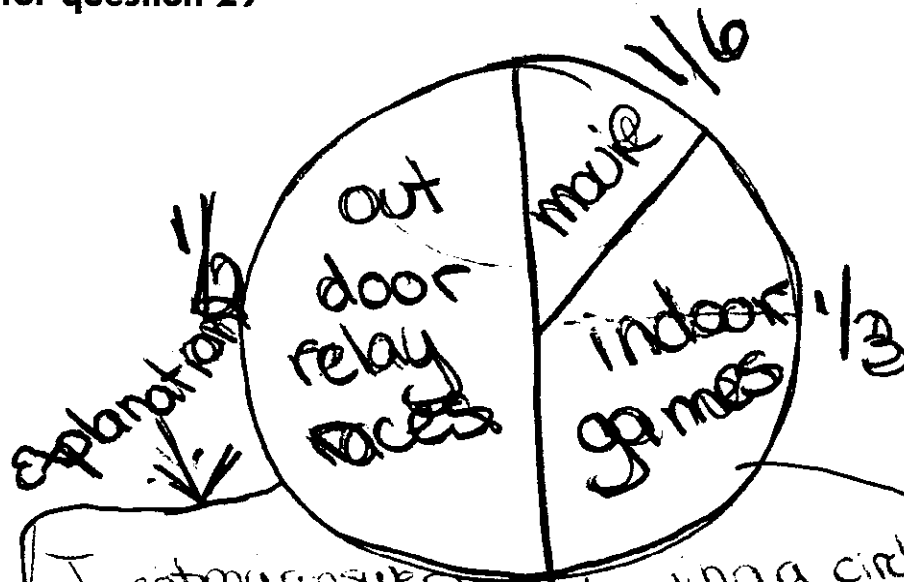
$\frac{1}{2}$ of the class chose outdoor relay races.

$\frac{1}{3}$ of the class chose indoor games.

The rest of the class chose to watch a movie.

- How many students chose to watch a movie?

- Show all of your work and explain your answer.

Work area for question 29

out door relay races

movie 1/6

indoor games 1/3

1/2

explanation

I got my answer by drawing a circle and doing half of the class out door relay races and 1/3 of the class doing inside games and the rest of the circle would be a movie and that came out to 1/6.

Score Print: 3

STOP

If you have time, you may review your work in this section only.

DO NOT GO ON UNTIL YOU ARE TOLD TO DO SO.

Page 25

30

29. On Friday, your class will have a party after lunch. Each of the 30 students in your class has chosen one party activity. Here are the results:

$\frac{1}{2}$ of the class chose outdoor relay races.

$\frac{1}{3}$ of the class chose indoor games.

The rest of the class chose to watch a movie.

- How many students chose to watch a movie?

- Show all of your work and explain your answer.

Work area for question 29

Five students said that they wanted to go watch a movie. I added fifteen plus ten and it was twentyfive. (Five more equal thirty.)

STOP

If you have time, you may review your work in this section only. DO NOT GO ON UNTIL YOU ARE TOLD TO DO SO.

Score Point: 2

81

29. On Friday, your class will have a party after lunch. Each of the 30 students in your class has chosen one party activity. Here are the results:

> $\frac{1}{2}$ of the class chose outdoor relay races.
>
> $\frac{1}{3}$ of the class chose indoor games.
>
> **The rest of the class chose to watch a movie.**

- How many students chose to watch a movie?

- Show all of your work and explain your answer.

Work area for question 29

10 kids chose to watch a movie.

15 kds
+15 kids
30 kids

15 kds
+ 5 kids
20

20 kids
+ 10 kids
30 kids

½ of the class is 15 kids. ⅓ of the class is 5 kids all that equals 30 kids.

If you have time, you may review your work in this section only.

DO NOT GO ON
UNTIL YOU ARE
TOLD TO DO SO.

Score Point : 2

ESPA - SE   **Item:**   29
   ESPA Math
Score: 2
Sample #:   3

G5

▲ ▲ ▲

29. On Friday, your class will have a party after lunch. Each of the 30 students in your class has chosen one party activity. Here are the results:

$\frac{1}{2}$ of the class chose outdoor relay races.

$\frac{1}{3}$ of the class chose indoor games.

The rest of the class chose to watch a movie.

- How many students chose to watch a movie?

- Show all of your work and explain your answer.

Work area for question 29

10 students will wach a movie.

I got my answer by ↗half of 30 is 15.

subtracking

Then toking 15 and subtracking it with $\frac{1}{3}$ of 15. and got 10

```
 30 hole
-15 Haft
─────────
 15 haft of 30


 15 Half
-5 ⅓ of half
─────────
 10        class
```

STOP

If you have time, you may review your work in this section only.

DO NOT GO ON UNTIL YOU ARE TOLD TO DO SO.

Page 25

Score Point: 2

29. On Friday, your class will have a party after lunch. Each of the 30 students in your class has chosen one party activity. Here are the results:

$\frac{1}{2}$ of the class chose outdoor relay races.

$\frac{1}{3}$ of the class chose indoor games.

The rest of the class chose to watch a movie.

- **How many students chose to watch a movie?**

- **Show all of your work and explain your answer.**

answer

13 want to whach the race. I got 2 and put it into 30 and got 13 for races. than I got 3 into 30 and got 10 for games then I got for movie. So I picked 13.

Work area for question 29

$$10 \times 1 = 10$$

$$13$$

$$13 \times 1 = 13$$

$$2\overline{)30}$$
$$\underline{2}$$
$$00$$

$$x =$$

$$3\overline{)30}$$
$$\underline{-3}$$
$$0\ 0$$

If you have time, you may review your work in this section only.   DO NOT GO ON UNTIL YOU ARE TOLD TO DO SO.

Score Point : 1

29. On Friday, your class will have a party after lunch. Each of the 30 students in your class has chosen one party activity. Here are the results:

$\frac{1}{2}$ of the class chose outdoor relay races.

$\frac{1}{3}$ of the class chose indoor games.

The rest of the class chose to watch a movie.

- How many students chose to watch a movie?

- Show all of your work and explain your answer.

Work area for question 29

10 Students
want to wacth
a movie.

$$\frac{1}{2} = \begin{array}{r} 30 \\ -15 \\ \hline 15 \end{array}$$

$$\begin{array}{r} 15 \\ + 5 \\ \hline 20 \end{array}$$

$$\begin{array}{r} 20 \\ +10 \\ \hline 30 \end{array}$$

$$\begin{array}{r} 30 \\ -20 \\ \hline 10 \ students \end{array}$$

STOP

If you have time, you may review your work in this section only.

DO NOT GO ON
UNTIL YOU ARE
TOLD TO DO SO.

Page 25

Score Point : 1

29. On Friday, your class will have a party after lunch. Each of the 30 students in your class has chosen one party activity. Here are the results:

$\frac{1}{2}$ of the class chose outdoor relay races.

$\frac{1}{3}$ of the class chose indoor games.

The rest of the class chose to watch a movie.

- How many students chose to watch a movie?

- Show all of your work and explain your answer.

Work area for question 29

5 students chose to watch a movie.

Score Point: 1

If you have time, you may review your work in this section only.

DO NOT GO ON UNTIL YOU ARE TOLD TO DO SO.

STOP

ESPA Math
Item: 29
Score: 0
Sample #: 1

G13
▲ ▲ ▲ ▲

29. On Friday, your class will have a party after lunch. Each of the 30 students in your class has chosen one party activity. Here are the results:

> $\frac{1}{2}$ of the class chose outdoor relay races.
>
> $\frac{1}{3}$ of the class chose indoor games.
>
> **The rest of the class chose to watch a movie.**

- How many students chose to watch a movie?

- Show all of your work and explain your answer.

Work area for question 29

$\frac{1}{4}$ of the class chose to watch a movie. I got that answer because if $\frac{1}{2}$ (half) of the class chose outdoor relay races, and $\frac{1}{3}$ of the class chose indoor games $\frac{1}{4}$ must of chose to watch the movie because $\frac{1}{4}$ and $\frac{1}{3}$ make $\frac{1}{2}$. That is how I got my answer—

STOP

If you have time, you may review your work in this section only.

DO NOT GO ON
UNTIL YOU ARE
TOLD TO DO SO.

Score Point : 0

24

ESPA Math
Item: 29
Score: 0
Sample #: 2

G12

▲ ▲ ▲ ▲

29. On Friday, your class will have a party after lunch. Each of the 30 students in your class has chosen one party activity. Here are the results:

$\frac{1}{2}$ of the class chose outdoor relay races.

$\frac{1}{3}$ of the class chose indoor games.

The rest of the class chose to watch a movie.

- How many students chose to watch a movie? 25 $\frac{1}{3}$

- Show all of your work and explain your answer. $\frac{1}{5}$

$$2\cancel{30}6^{10}$$
$$\frac{5}{25}$$

Work area for question 29

$$+ \begin{array}{c} \frac{1}{2} \\ \frac{1}{3} \\ \frac{1}{5} \end{array}$$

$$\begin{array}{c} 30 \\ 5 \\ \hline 25. \end{array}$$

I got my answer by subbacting $\frac{1}{2}$ takaway $\frac{1}{3}$. and I got 30. and 30 takeaway 5 equal 25.

STOP

If you have time, you may review your work in this section only.

DO NOT GO ON
UNTIL YOU ARE
TOLD TO DO SO.

Score Point : 0

ESPA Math
ESPA
Item: 29
Score: 0
Sample #: 3

G11
▲ ▲ ▲ ▲

29. On Friday, your class will have a party after lunch. Each of the 30 students in your class has chosen one party activity. Here are the results:

$\frac{1}{2}$ of the class chose outdoor relay races.

$\frac{1}{3}$ of the class chose indoor games.

The rest of the class chose to watch a movie.

- How many students chose to watch a movie?

- Show all of your work and explain your answer.

Work area for question 29

$30 \div 1.2 \div 1.3 = \underline{19.230769}$

19 students chose to watch a movie

If you have time, you may review your work in this section only.

STOP

DO NOT GO ON
UNTIL YOU ARE
TOLD TO DO SO.

Score Point: 0

71

3 points – The student accurately plots the points, sketches the parallelogram, performs the flip, and states that the area is about the same.

2 points – The student accurately plots the points, or may attempt to plot the points, but may have a <u>minor</u> error. The student attempts to sketch the image of the flipped parallelogram and may or may not state that the area is about the same.

    OR   The student accurately plots the points, states that the area is about the same but does not perform the flip.

1 point – The student accurately plots the points, but fails to recognize that the areas are the same.

    OR   The student misplots more than 1 point, but correctly states the areas are the same.

0 points – The response shows insufficient understanding of the problem's mathematical concepts.

▲▲▲
▲▲

36. Use the grid provided for the following problem.
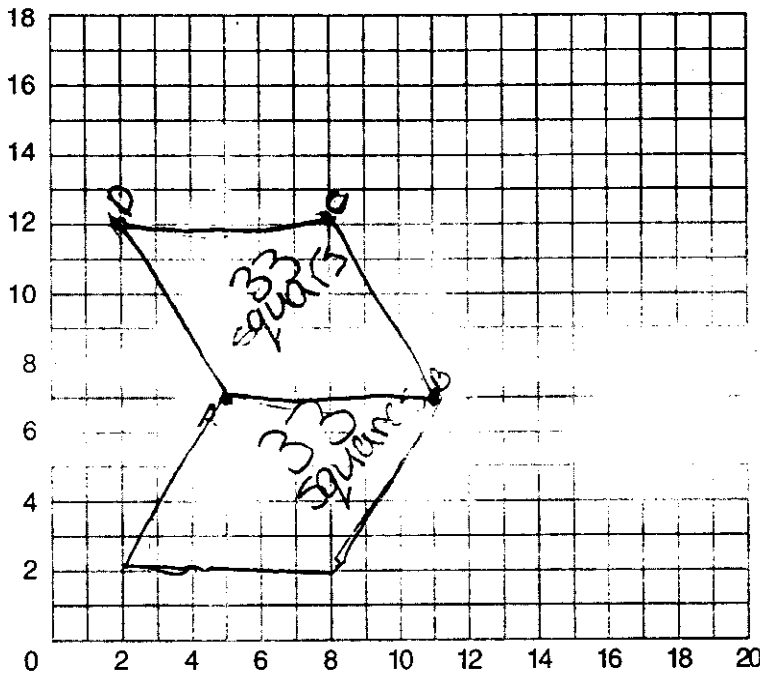
- **Plot and label the points listed below.**

  B (11, 7)   C (8, 12)   D (2, 12)

- **Connect points A, B, C, and D to draw figure ABCD.**

- **Use the colored shape that matches the figure ABCD above. Flip your shape over the line AB. Trace the shape.**

- **Is the area of the flipped shape more, less, or about the same as the original?**

  I got my 33 squars by counting

Work area for question 36

I got my 33 squares by counting.

Score Point : 3

312098

36. Use the grid provided for the following problem.

- **Plot and label the points listed below.**

  B (11, 7)   **C (8, 12)**   **D (2, 12)**

- **Connect points A, B, C, and D to draw figure ABCD.**

- **Use the colored shape that matches the figure ABCD above. Flip your shape over the line AB. Trace the shape.**

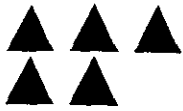- **Is the area of the flipped shape more, less, or about the same as the original?**

4
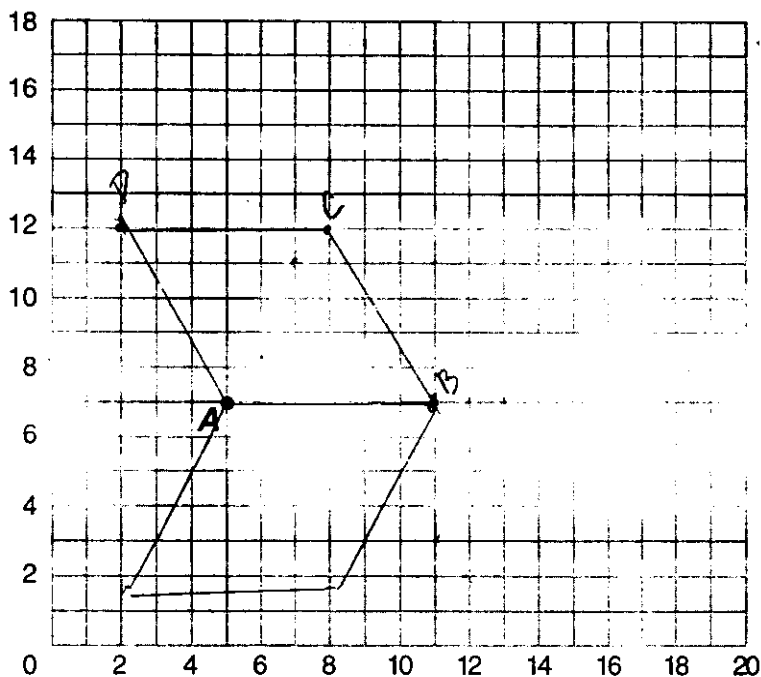
Work area for question 36

Its the same because its the same shape and size.

36. Use the grid provided for the following problem.

- **Plot and label the points listed below.**

  B (11, 7)   *C* (8, 12)   *D* (2, 12)

- **Connect points *A*, *B*, *C*, and *D* to draw figure *ABCD*.**

- **Use the colored shape that matches the figure *ABCD* above. Flip your shape over the line *AB*. Trace the shape.**

- **Is the area of the flipped shape more, less, or about the same as the original?**

40

Work area for question 36

There area of the flipped shape is about the same tasn the original shapebecause you traced.

Score Point : 3

311840

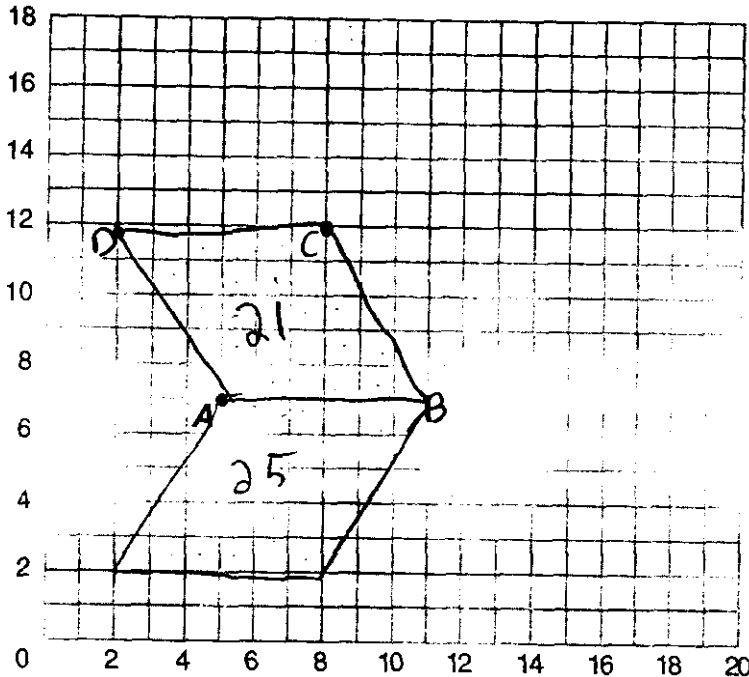**36. Use the grid provided for the following problem.**

- **Plot and label the points listed below.**

  B (11, 7)   C (8, 12)   D (2, 12)

- **Connect points A, B, C, and D to draw figure ABCD.**

- **Use the colored shape that matches the figure ABCD above. Flip your shape over the line AB. Trace the shape.**

- **Is the area of the flipped shape more, less, or about the same as the original?**

Work area for question 36

It is more because on the original I counted 21. On the other one I counted 25, That is how I got my answer
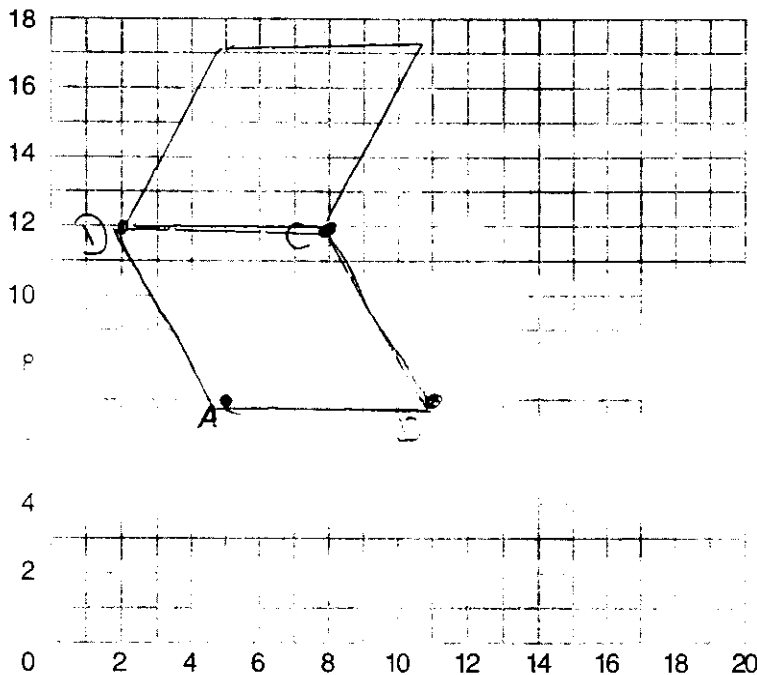
Score Point : 2

306623

36. Use the grid provided for the following problem.

- **Plot and label the points listed below.**

  B (11, 7)   C (8, 12)   D (2, 12)

- **Connect points A, B, C, and D to draw figure ABCD.**

- **Use the colored shape that matches the figure ABCD above. Flip your shape over the line AB. Trace the shape.**

- **Is the area of the flipped shape more, less, or about the same as the original?**

28

Work area for question 36

About the Same.

Score Point: 2

309291

Item: 36
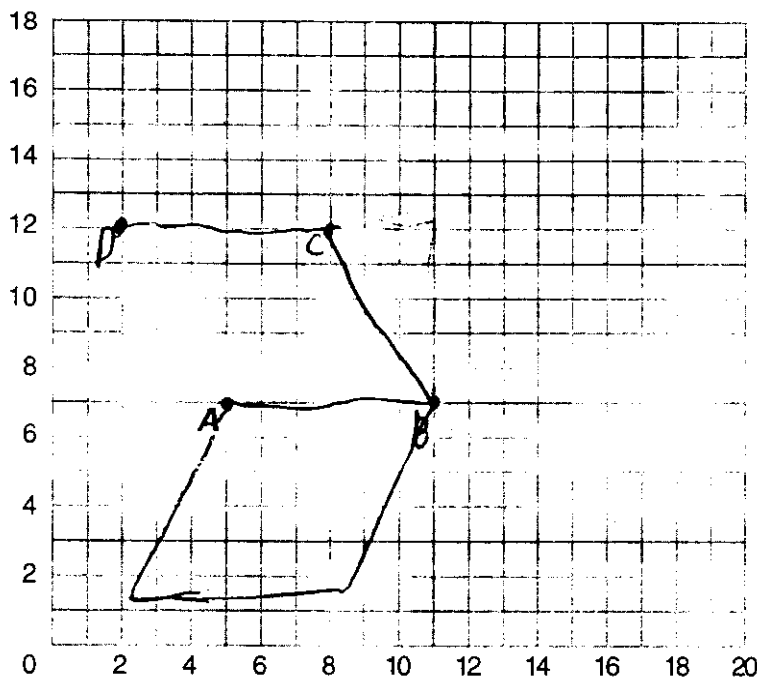Score: 2
Sample #: 3

36. Use the grid provided for the following problem.

- **Plot and label the points listed below.**

  B (11, 7)   *C* (8, 12)   *D* (2, 12)

- **Connect points *A*, *B*, *C*, and *D* to draw figure *ABCD*.**

- **Use the colored shape that matches the figure *ABCD* above. Flip your shape over the line *AB*. Trace the shape.**

- **Is the area of the flipped shape more, less, or about the same as the original?**

Work area for question 36

It is the same because all they did was filp it over.

Score Point : 2

36. Use the grid provided for the following problem.
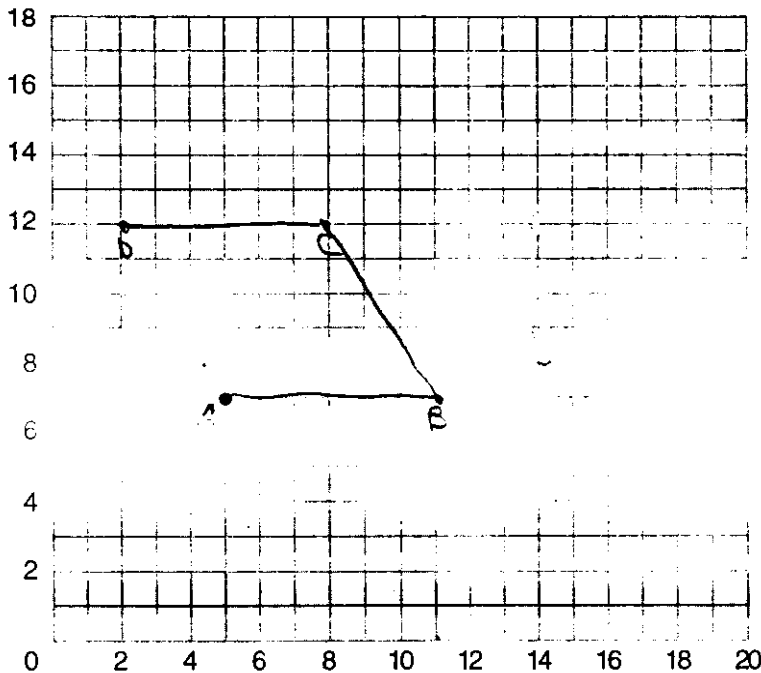
- **Plot and label the points listed below.**

  B (11, 7) **C (8, 12)** **D (2, 12)**

- **Connect points A, B, C, and D to draw figure ABCD.**

- **Use the colored shape that matches the figure ABCD above. Flip your shape over the line AB. Trace the shape.**

- **Is the area of the flipped shape more, less, or about the same as the original?**

  about the same as the original

Work area for question 36

The shape is about the same as the original Because when I put the shape on the paper It came out the same
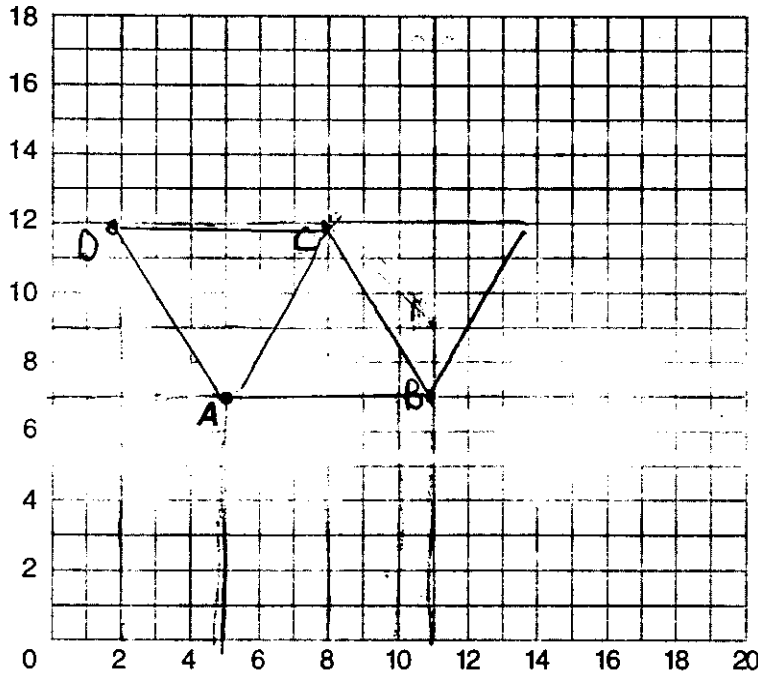
Score Point : 1

307223

36. Use the grid provided for the following problem.

- Plot and label the points listed below.

  B (11, 7)   C (8, 12)   D (2, 12)

- Connect points *A, B, C,* and *D* to draw figure *ABCD*.

- Use the colored shape that matches the figure *ABCD* above. Flip your shape over the line *AB*. Trace the shape.

- Is the area of the flipped shape more, less, or about the same as the original?

Work area for question 36

The area of the flipped shape is not even because if you turn it around it looks differently. The shape that matches it is the blue shape

Score Point : 1

ESPA - SECURE

ESPA Math
Item: 36
Score: 1
Sample #: 3

G10

36. Use the grid provided for the following problem.

- **Plot and label the points listed below.**

  B (11, 7)   **C (8, 12)**   **D (2, 12)**

- **Connect points A, B, C, and D to draw figure ABCD.**

- **Use the colored shape that matches the figure ABCD above. Flip your shape over the line AB. Trace the shape.**

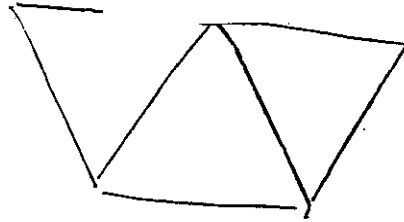- **Is the area of the flipped shape more, less, or about the same as the original?**

Work area for question 36

Score Point : 1

TURN TO THE NEXT PAGE.

ESPA - SECUF
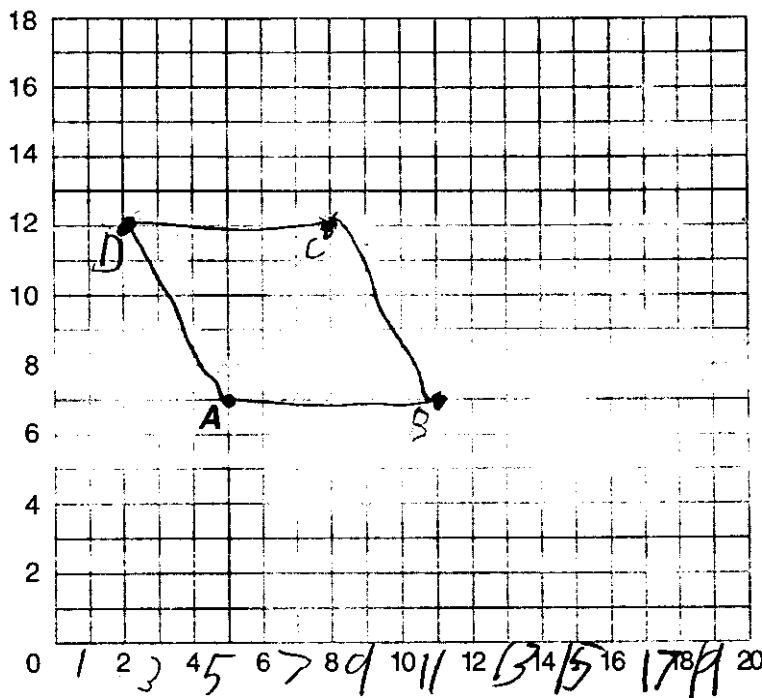
ESPA Math

Item: 36

Score: 0

Sample #: 1

_G11

36. Use the grid provided for the following problem.

- **Plot and label the points listed below.**

    B (11, 7)   *C* (8, 12)   *D* (2, 12)

- **Connect points *A*, *B*, *C*, and *D* to draw figure *ABCD*.**

- **Use the colored shape that matches the figure *ABCD* above. Flip your shape over the line *AB*. Trace the shape.**

- **Is the area of the flipped shape more, less, or about the same as the original?**

57

Work area for question 36

Score Point: 0

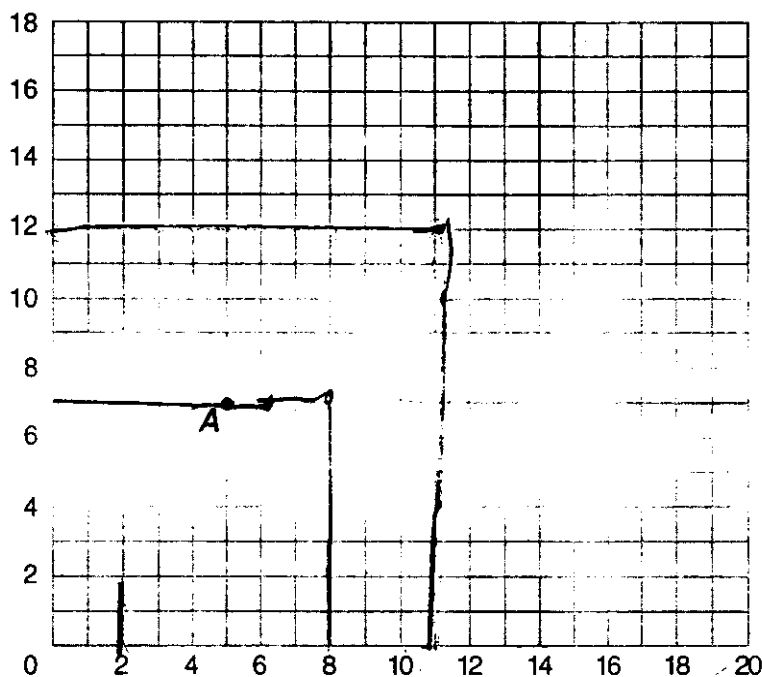308016 57

Item: 36
Score: 0
Sample #: 2

36. Use the grid provided for the following problem.

- **Plot and label the points listed below.**

    B (11, 7)   C (8, 12)   D (2, 12)

- **Connect points A, B, C, and D to draw figure ABCD.**

- **Use the colored shape that matches the figure ABCD above. Flip your shape over the line AB. Trace the shape.**

- **Is the area of the flipped shape more, less, or about the same as the original?**

Work area for question 36

I skiped an area for avery
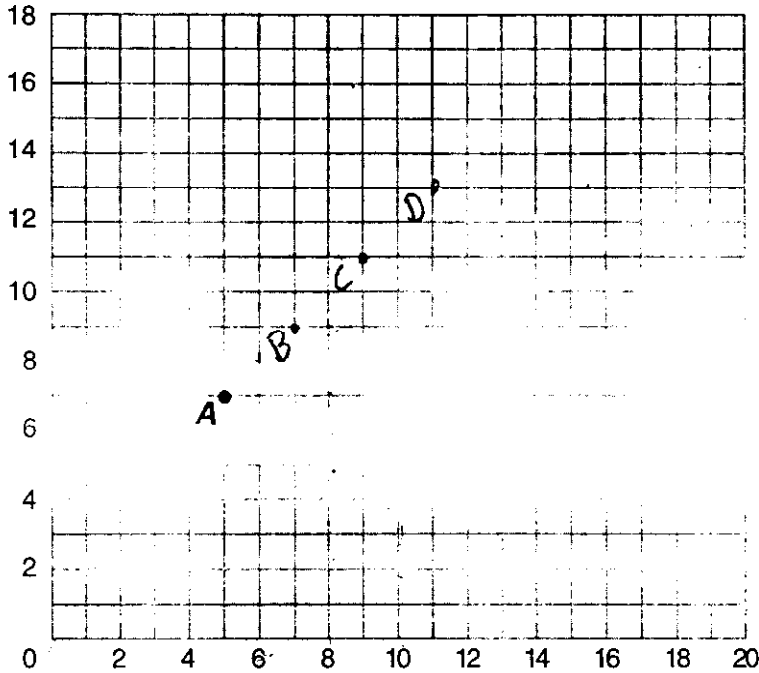Letter and that's how I got my answer,

Score Point : 0

36. Use the grid provided for the following problem.
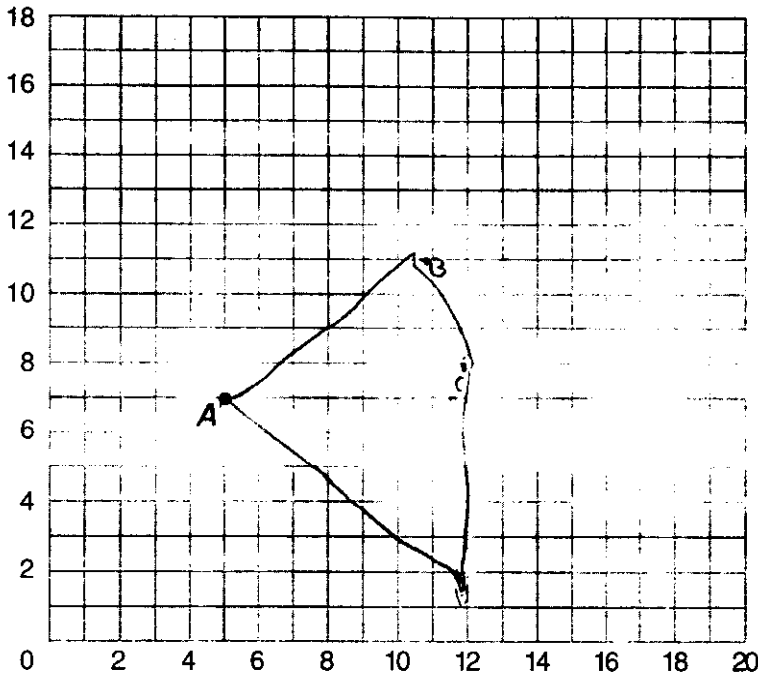
- **Plot and label the points listed below.**

    B (11, 7)   C (8, 12)   D (2, 12)

- **Connect points A, B, C, and D to draw figure ABCD.**

- **Use the colored shape that matches the figure ABCD above. Flip your shape over the line AB. Trace the shape.**

- **Is the area of the flipped shape more, less, or about the same as the original?**

Work area for question 36

It is less. The flip shape. I flip it and it did not become bigger it become smaller. I connect the points. I macth it, and I flipped it

Score Point: 0

306621

3 points – The student gives a valid rule to describe Tony's pattern. The student also creates a rule to describe his or her new number pattern and accurately lists the first five numbers in that pattern.

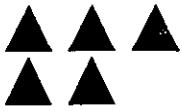**2 points –** The student gives a valid rule for Tony's pattern and either describes a new number pattern without providing the first 5 numbers or lists 5 numbers in an identifiable pattern, but the pattern he or she made up does not fit the description.

    OR The student creates a rule to describe his or her new number pattern and accurately lists the first five numbers in that pattern.

1 point – The student gives a valid rule to describe Tony's pattern.

    OR The student either describes a new number pattern without providing the first 5 numbers or lists 5 numbers in an identifiable pattern, but the pattern he or she made up does not fit the description.

0 points – The response shows insufficient understanding of the problem's mathematical concepts.

    OR The student lists five numbers without providing an indication of a rule.

37. **Mrs. Thompson's class recently completed a lesson on number patterns. Each student had to write a rule to describe a pattern of numbers and list some numbers in the pattern. Two examples are shown below.**

> **Rule:** Start with 2. Multiply each number by 2 to get the next number in the pattern.
>
> **Pattern:** 2, 4, 8, 16, 32, ...

> **Rule:** Start with 1. Add 1 to the first number, add 2 to the second number, add 3 to the third number, and so on.
>
> **Pattern:** 1, 2, 4, 7, 11, ...

- **Tony's pattern is shown below. Write a rule to describe his pattern.**

    1, 4, 5, 8, 9, ...

- **Write your own rule for a number pattern.**

- **Also, write the first five numbers in your pattern.**

13

Work area for question 37

what you do in this pattern is first you add 3 and then you add 1.

In my pattern you have to multiply the number by 3 and then subtract it by 1. Here are the first 5 numbers of my pattern.

1, 2, 5, 14, 41.

Score Point : 3

STOP

If you have time, you may review your work in this section only.   DO NOT GO ON
UNTIL YOU ARE
TOLD TO DO SO.

37. Mrs. Thompson's class recently completed a lesson on number patterns. Each student had to write a rule to describe a pattern of numbers and list some numbers in the pattern. Two examples are shown below.

> **Rule:** Start with 2. Multiply each number by 2 to get the next number in the pattern.
>
> **Pattern:** 2, 4, 8, 16, 32, ...

> **Rule:** Start with 1. Add 1 to the first number, add 2 to the second number, add 3 to the third number, and so on.
>
> **Pattern:** 1, 2, 4, 7, 11, ...

- Tony's pattern is shown below. Write a rule to describe his pattern.

  1, 4, 5, 8, 9, ...

- Write your own rule for a number pattern.

- Also, write the first five numbers in your pattern.

Work area for question 37

Rule: Add3 then add 1 and so on!

Pattern : 1, 4, 5, 8, 9 ...

Rule: Add 5 then you have to add 1.

Pattern: 5, 10, 11, 16, 17, ...

Score Point : 3

STOP

If you have time, you may review your work in this section only. DO NOT GO ON UNTIL YOU ARE TOLD TO DO SO.

37. **Mrs. Thompson's class recently completed a lesson on number patterns. Each student had to write a rule to describe a pattern of numbers and list some numbers in the pattern. Two examples are shown below.**

> **Rule:** Start with 2. Multiply each number by 2 to get the next number in the pattern.
>
> **Pattern:** 2, 4, 8, 16, 32, ...

> **Rule:** Start with 1. Add 1 to the first number, add 2 to the second number, add 3 to the third number, and so on.
>
> **Pattern:** 1, 2, 4, 7, 11, ...

- **Tony's pattern is shown below. Write a rule to describe his pattern.**

    1, 4, 5, 8, 9, ...

- **Write your own rule for a number pattern.**

- **Also, write the first five numbers in your pattern.**

Work area for question 37

Tony's

Start with 1. Add 3 to the first number, add 1 to the second number, add 3 to the third number, and add 1 to the fourth number.

32, 28, 24, 20, 16 -

Rule

Start with 32
Subtract each Number by 4

Score Point : 3

STOP

If you have time, you may review your work in this section only.

DO NOT GO ON
UNTIL YOU ARE
TOLD TO DO SO.

Page 37

37. Mrs. Thompson's class recently completed a lesson on number patterns. Each student had to write a rule to describe a pattern of numbers and list some numbers in the pattern. Two examples are shown below.

> **Rule:** Start with 2. Multiply each number by 2 to get the next number in the pattern.
>
> **Pattern:** 2, 4, 8, 16, 32, ...

> **Rule:** Start with 1. Add 1 to the first number, add 2 to the second number, add 3 to the third number, and so on.
>
> **Pattern:** 1, 2, 4, 7, 11, ...

- Tony's pattern is shown below. Write a rule to describe his pattern. *Tony is counting by threes.*

  1, 4, 5, 8, 9, ...

- Write your own rule for a number pattern. *2,4, 6, 8, 10,12...*

- Also, write the first five numbers in your pattern. *2,4,6, 8,10...* *Those are the first five numbers.*

51

Work area for question 37

Rule: Start by
counting by twos.
Pattern: 2,4,6,8,10,12...

Score Point: 2

STOP

If you have time, you may review your work in this section only.

DO NOT GO ON
UNTIL YOU ARE
TOLD TO DO SO.

307222

37. **Mrs. Thompson's class recently completed a lesson on number patterns. Each student had to write a rule to describe a pattern of numbers and list some numbers in the pattern. Two examples are shown below.**

> **Rule:** Start with 2. Multiply each number by 2 to get the next number in the pattern.
>
> **Pattern:** 2, 4, 8, 16, 32, ...

> **Rule:** Start with 1. Add 1 to the first number, add 2 to the second number, add 3 to the third number, and so on.
>
> **Pattern:** 1, 2, 4, 7, 11, ...

- **Tony's pattern is shown below. Write a rule to describe his pattern.**

$$1, 4, 5, 8, 9, ...$$

$$+3 +1$$

- **Write your own rule for a number pattern.**

$$+1 \times 2 +1 \times 2$$

- **Also, write the first five numbers in your pattern.**

$$1, 2, 3, 4, 8, 9, 2$$

Work area for question 37

Score Point : 2

If you have time, you may review your work in this section only.

DO NOT GO ON
UNTIL YOU ARE
TOLD TO DO SO.

310539

37. Mrs. Thompson's class recently completed a lesson on number patterns. Each student had to write a rule to describe a pattern of numbers and list some numbers in the pattern. Two examples are shown below.

> **Rule:** Start with 2. Multiply each number by 2 to get the next number in the pattern.
>
> **Pattern:** 2, 4, 8, 16, 32, ...

> **Rule:** Start with 1. Add 1 to the first number, add 2 to the second number, add 3 to the third number, and so on.
>
> **Pattern:** 1, 2, 4, 7, 11, ...

- Tony's pattern is shown below. Write a rule to describe his pattern.

$$1, 4, 5, 8, 9, ...$$

- Write your own rule for a number pattern.

- Also, write the first five numbers in your pattern.

Work area for question 37 1. 2, 4, 8, 16, 32 ..., 22

2. 1, 2, 4, 7, 11 ... 28

3. 1, 4, 5, 89 ... 12

2, 4, 6, 8, 10, . 12.

My Pattern is by 2.

Score Point : 2

STOP
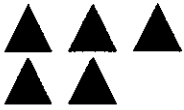
If you have time, you may review your work in this section only. DO NOT GO ON UNTIL YOU ARE TOLD TO DO SO.

307140

37. Mrs. Thompson's class recently completed a lesson on number patterns. Each student had to write a rule to describe a pattern of numbers and list some numbers in the pattern. Two examples are shown below.

> **Rule:**   Start with 2. Multiply each number by 2 to get the next number in the pattern.
>
> **Pattern:**   2, 4, 8, 16, 32, ...

> **Rule:**   Start with 1. Add 1 to the first number, add 2 to the second number, add 3 to the third number, and so on.
>
> **Pattern:**   1, 2, 4, 7, 11, ...

- Tony's pattern is shown below. Write a rule to describe his pattern.

    1, 4, 5, 8, 9, ...

- Write your own rule for a number pattern.

- Also, write the first five numbers in your pattern.

Work area for question 37

Rule: Start with 1. add one to 3. add 1 to 4, add 3 to 5. add 1 to 8. add 1 to 9,

Score Point: 1

If you have time, you may review your work in this section only. DO NOT GO ON UNTIL YOU ARE TOLD TO DO SO.

ESPA Math

306626

3A

37. **Mrs. Thompson's class recently completed a lesson on number patterns. Each student had to write a rule to describe a pattern of numbers and list some numbers in the pattern. Two examples are shown below.**

> **Rule:** **Start with 2. Multiply each number by 2 to get the next number in the pattern.**
>
> **Pattern:** **2, 4, 8, 16, 32, ...**

> **Rule:** **Start with 1. Add 1 to the first number, add 2 to the second number, add 3 to the third number, and so on.**
>
> **Pattern:** **1, 2, 4, 7, 11, ...**

- **Tony's pattern is shown below. Write a rule to describe his pattern.**

1, 4, 5, 8, 9, ...

- **Write your own rule for a number pattern.**

- **Also, write the first five numbers in your pattern.**

Work area for question 37

Start with 1. Then add 3 for the first number; after that add 1 to the next and keep on going 3, 1, 3, 1 and so on.

20, 15, 1, 25, 20, 10, 5, 8, 4, ...

Start with 20. For the first number you go down 5 then 5 again then 15 then 5 down again. After that 10 down after, 5 down. After 3 up and finally 4 down.

Score Point: 1

If you have time, you may review your work in this section only.

DO NOT GO ON UNTIL YOU ARE TOLD TO DO SO.

37. **Mrs. Thompson's class recently completed a lesson on number patterns. Each student had to write a rule to describe a pattern of numbers and list some numbers in the pattern. Two examples are shown below.**

> **Rule:** Start with 2. Multiply each number by 2 to get the next number in the pattern.
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>
> **Pattern:** 1, 2, 4, 7, 11, ...

- **Tony's pattern is shown below. Write a rule to describe his pattern.**

  1, 4, 5, 8, 9, ...

- **Write your own rule for a number pattern.**

- **Also, write the first five numbers in your pattern.**

Work area for question 37

A rule to decribe his pattern to get the correct answer, is to subtract every number starting with the first "one and subtract the second one too.

Rule: Start with the number six and subtract twelve, and keep subtracting each number.

Pattern: 6, 12, 18, 24, 30, 36, ... 42

$$36 + 6 \over 42$$

Score Point : 1

STOP

If you have time, you may review your work in this section only.

DO NOT GO ON
UNTIL YOU ARE
TOLD TO DO SO.

307139

ESPA - SECURI

ESPA Math

Item: 37
Score: 0
Sample #: 1

G 11

37. **Mrs. Thompson's class recently completed a lesson on number patterns. Each student had to write a rule to describe a pattern of numbers and list some numbers in the pattern. Two examples are shown below.**

> **Rule:** Start with 2. Multiply each number by 2 to get the next number in the pattern.
>
> **Pattern:** 2, 4, 8, 16, 32, ...

> **Rule:** Start with 1. Add 1 to the first number, add 2 to the second number, add 3 to the third number, and so on.
>
> **Pattern:** 1, 2, 4, 7, 11, ...

- **Tony's pattern is shown below. Write a rule to describe his pattern.**

  1, 4, 5, 8, 9, ...

- **Write your own rule for a number pattern.**
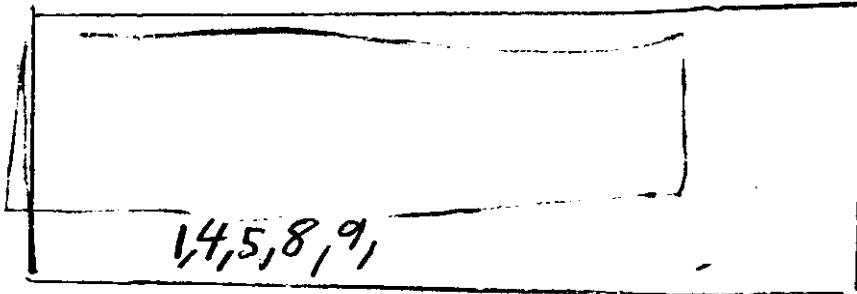
- **Also, write the first five numbers in your pattern.**

Work area for question 37

1,4,5,8,9,

it like conting by 2 than 1 than back to 2

Score Point : 0

STOP

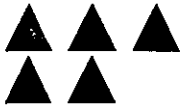If you have time, you may review your work in this section only. DO NOT GO ON
UNTIL YOU ARE
TOLD TO DO SO.

ESPA - SECUI

ESPA Math

Item: 37
Score: 0
Sample #: 2

G13

37. Mrs. Thompson's class recently completed a lesson on number patterns. Each student had to write a rule to describe a pattern of numbers and list some numbers in the pattern. Two examples are shown below.

> **Rule:** Start with 2. Multiply each number by 2 to get the next number in the pattern.
>
> **Pattern:** 2, 4, 8, 16, 32, ...

> **Rule:** Start with 1. Add 1 to the first number, add 2 to the second number, add 3 to the third number, and so on.
>
> **Pattern:** 1, 2, 4, 7, 11, ...

- Tony's pattern is shown below. Write a rule to describe his pattern.

  1, 4, 5, 8, 9, ...

- Write your own rule for a number pattern.

- Also, write the first five numbers in your pattern.

Work area for question 37

For Tony's patern They add three, add one, add two, and add one.
32, 64, 96-1, 160, 256

Score Point: 0

If you have time, you may review your work in this section only.

DO NOT GO ON
UNTIL YOU ARE
TOLD TO DO SO.

Page 37

308013

ESPA - SECUI

ESPA Math

Item: 37
Score: 0
Sample #: 3

G 14

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▲ ▲

37. **Mrs. Thompson's class recently completed a lesson on number patterns. Each student had to write a rule to describe a pattern of numbers and list some numbers in the pattern. Two examples are shown below.**

Rule: **Start with 2. Multiply each number by 2 to get the next number in the pattern.**

Pattern: **2, 4, 8, 16, 32, ...**

Rule: **Start with 1. Add 1 to the first number, add 2 to the second number, add 3 to the third number, and so on.**

Pattern: **1, 2, 4, 7, 11, ...**

• **Tony's pattern is shown below. Write a rule to describe his pattern.**

1, 4, 5, 8, 9, ...

• **Write your own rule for a number pattern.**

• **Also, write the first five numbers in your pattern.**

GO ON TO THE NEXT PAGE. ➡

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Work area for question 37

In Tonys pattern he added 4 and

and then he added 1. for an Example
He took 1, #4, +1, +4, +1, +4, and so on.

Here is my pattern.
1, 4, 5, 8, 9, 10, 14, 15, 17, 20.

Score Point: 0

STOP

If you have time, you may review your work in this section only.   DO NOT GO ON
UNTIL YOU ARE
TOLD TO DO SO.

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